

Lower Laytonville Valley Groundwater Basin

- Groundwater Basin Number: 1-38
- County: Mendocino
- Surface Area: 2,150 acres (approx. 3.5 square miles)

Basin Boundaries and Hydrology

Lower Laytonville Valley is a narrow north- and northwest-trending alluvial basin located in northwest-central Mendocino County. The town of Laytonville is situated approximately 1.5 miles southeast of the southern extent of this valley. The main alluvial portion of the valley is approximately 4 miles long and ranges in width from 0.25 to 1 mile. The groundwater basin is primarily defined by the areal extent of unconsolidated alluvial deposits within the valley bounded by Franciscan Complex; however, areas of terrace deposits located northeast and west of the main alluvial valley are also included in the basin. This basin is separated from the Laytonville Valley Groundwater Basin to the south by a narrow section of Ten Mile Creek formed in Franciscan Complex bedrock. Strands of the northwest-trending Maacama Fault Zone transect the basin.

The valley drains northward through Ten Mile Creek to the South Fork. Major tributaries that drain into Ten Mile Creek include Mill, Mud Springs, Big Rock, Streeter, and Lewis Creeks. Precipitation in the Lower Laytonville Valley ranges from about 63 inches on the eastern side to 71 inches on the western side of the basin.

Hydrogeologic Information

Water Bearing Formations

Water bearing formations in Lower Laytonville Valley include Alluvium and Continental Terrace Deposits. The Franciscan Complex bedrock that surrounds the basin is considered to be essentially non-water bearing. There are limited data available on the hydrogeology of this basin. Information on water bearing units and hydrogeology was taken primarily from Farrar (1986) based on data from the neighboring Laytonville Valley Groundwater Basin.

Alluvium. The alluvium is Holocene in age and consists of gravel, sand, silt, and clay deposits that are uncemented and only slightly compacted. The maximum thickness of the alluvium in this basin is not known. Based on alluvial wells in Laytonville Valley, yields range from 7 to 700 gpm. Very little is known about the hydrogeology of this unit within the basin. There are no specific yields reported for the alluvium in this basin, but similar deposits in Laytonville Valley have estimated specific yields ranging from 10 to 16 percent (Cardwell 1965; DWR 1965).

Continental Terrace Deposits. Terrace deposits are exposed in three separate areas along the east side of the basin and one large exposure occurs along the northwest side of the basin. These deposits are Pliocene to Pleistocene in age and consist of gravel, sand, silt, and clay that are weakly cemented in places and strongly dissected. Where exposed at the surface, these deposits are probably no more than 50 feet thick. There is insufficient data available to determine the subsurface extent of this unit. Very little is

known about the hydrogeology of this unit within this basin. Water yields reported from wells installed into this formation in Laytonville Valley are low and range from 10 to 25 gpm. An estimated specific yield of 5 percent was given to similar deposits in Laytonville Valley (Cardwell 1965).

Groundwater Level Trends

No well hydrographs are available in this basin to analyze groundwater level trends.

Groundwater Storage

Groundwater Storage Capacity. There are no published data available for groundwater storage capacity in this basin.

Groundwater in Storage. There are no published data available for the amount of groundwater in storage in this basin.

Groundwater Budget (Type C)

There are insufficient data available from this basin to determine a groundwater budget.

Groundwater Quality

There are no published groundwater quality data available for wells in this basin.

Well Characteristics

Well yields (gal/min)	
Municipal/Irrigation	No known data
Total depths (ft)	
Domestic	No known data
Municipal/Irrigation	

Active Monitoring Data

Agency	Parameter	Number of wells /measurement frequency
DWR	Groundwater levels	None
	Miscellaneous water quality	None known
Department of Health Services and cooperators	Title 22 water quality	None

Basin Management

Groundwater management:	No groundwater management plans identified
Water agencies	
Public	Laytonville County Water District
Private	

References Cited

California Department of Water Resources (DWR) 1965. Water Resources and Future Water Requirements – North Coastal Hydrographic Area, Volume 1: Southern Portion (Preliminary Edition) – Bulletin No. 142-1.

Cardwell, G.T. 1965. Geology and Ground Water in Russian River Valley Areas and in Round, Laytonville and Little Lake Valleys, Sonoma and Mendocino Counties, California. USGS Water Supply Paper 1548.

Farrar, C.D. 1986. Ground-Water Resources in Mendocino County, California. USGS Water-Resources Investigations Report 85-4258.

Additional References

California Department of Water Resources (DWR) 1958. Recommended Water Well Construction and Sealing Standards, Mendocino County. Bulletin No. 62 – November.

Errata

Changes made to the basin description will be noted here.